

Air Quality LS 2.6 The Other Components of Air



Particles in Air

Read the first two paragraphs on page 96.

- How do particles get into the air and what allows the particles to stay in the air?

Demonstration

How Does Particulate Matter Form?

- Observe a beaker being held for 2-3 seconds above a lit candle.

Stop and Think



1. Describe what you saw on the bottom of the beaker. What do you think caused this?
2. How do you think particulate matter gets into the air?
3. You saw how quickly the particulate matter formed on the bottom of the beaker. What does this tell you about how easy it is for to become polluted?

Formation of Particulate Matter

Read page 97 and identify the main ideas from each paragraph using bulleted notes.

Paragraph 1			Paragraph 2
Paragraph 3		Formation of Particulate Matter	Paragraph 4

Combustion

Read page 97 and identify the main ideas from each paragraph using bulleted notes.

Paragraph 1	Paragraph 2
Paragraph 3	Paragraph 4

Combustion

Stop and Think



1. Think of an example in which something burns. Identify the fuel that is burned.
2. How is soot different from the other types of molecules you learned about?
3. What is an example of a physical change in matter? What is an example of a chemical change in matter? Why did you classify each change as you did?



Investigate: Molecules Formed During Combustion

Read the paragraph on the top of page 99.

1. With your group read and follow the procedure on the bottom of page 96.
2. When you have completed your model of CO_2 , sketch a diagram of it on the *Model Molecule* page. Label the atoms in the molecule.
3. When you have completed your model of H_2O , sketch a diagram of it on the *Model Molecule* page. Label the atoms in the molecule.

Read and the box on the top of page 100 and discuss as a class.

- Why are water and carbon dioxide stable molecules?



Stop and Think

1. Why do you think the water and carbon dioxide molecules are not pollutants when present in normal concentrations?
2. Of the molecules you made, how many of those structures are stable? How do you know that they are stable?
3. If you were to use your atomic model kit to build a soot molecule, how would you build it? Why might your soot molecule look different from the soot molecules of other students?

Update the Project Board Record what you now know about soot and particulate matter in the *What are we learning?* column. Record evidence from your investigations and reading in the *What is our evidence?* column. Record any questions you may have about the unstable molecule in the *What do we need to investigate?* column.

What's the Point? Use bulleted notes to identify the main ideas from LS 2.6

